

Claims

10. A plugging fluid for plugging a subterranean formation zone surrounding a drill hole consisting of an emulsion comprising:

- a) an oil phase containing:
 - i. an oil;
 - ii. an emulsifier; and
 - iii. 2.4-4 kg of cement per liter of oil; and
- b) an aqueous phase containing:
 - i. water; and
 - ii. 12-16 g of a polysaccharide per liter of water;

wherein the oil to water volume ratio ranges from 20:80 to 25:75.

11. The plugging fluid according to claim 10, further comprising a setting accelerator agent containing divalent or trivalent metal ions.

12. The plugging fluid according to claim 11, wherein said metal ions are Ca^{2+} .

13. The plugging fluid of any of claims 10-12, further comprising a clay extender.

14. A plugging fluid comprising per cubic meter of fluid:

- a. 133-166 liters of oil;
- b. 6-12 liters of emulsifier;
- c. 3-4 kg of polysaccharide;
- d. 600-700 kg of cement;
- e. 0-7kg of calcium hydroxide; and
- f. 466-500 liters of water.

15. The plugging fluid of claim 14, further comprising a clay extender.

16. A method for preparing a plugging fluid comprising the steps of:

- a) dissolving an emulsifier into oil;
- b1) adding cement to the oil to prepare a pre-mix; and
- c1) blending said pre-mix with water before pumping the plugging fluid into the well to form a pre-mix/water mixture.

17. The method of claim 16, further comprising the steps of:

- b2) adding a setting accelerator to the pre-mix; and
- c2) adding a polysaccharide to the pre-mix/water mixture.

18. A method of sealing a lost circulation zone in a wellbore comprising the step of:

1) pumping a plugging fluid and initiating the gellation of the plugging fluid by shear forces, wherein said plugging fluid comprises:

- a. an oil phase containing:
 - i. an oil;
 - ii. an emulsifier; and
 - iii. 2.4-4 kg of cement per liter of oil; and
- b. an aqueous phase containing:
 - i. water; and
 - ii. 12-16 g of a polysaccharide per liter of water; and

wherein the oil to water volume ratio ranges from 20:80 to 25:75.

19. The method of claim 18, wherein said plugging fluid further comprises a setting accelerator agent containing divalent or trivalent metal ions.

20. The method of claim 18, wherein said metal ions are Ca^{2+} .
21. The method of any of claims 18-20, wherein said plugging fluid further comprises a clay extender.
22. The method of claim 18, wherein the shear forces are applied through at least one drill bit nozzle.
23. The method of claim 18, wherein the shear forces are applied to the plugging fluid prior pumping said fluid into the wellbore.